

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) ~~[[A]]~~ An electric current detection circuit ~~[[for]]~~ in an induction heating device ~~detecting an electric current~~ comprising:

a current transformer having a primary winding connected to a coil of the induction heating device;

a buffer;

a diode configured to detect a peak value of an input current, the diode comprising an anode connected to a secondary winding of the current transformer at an input side of the circuit and a cathode connected to the buffer at an output side of the circuit;

capacitor having one end connected to the cathode of the diode and the other end connected to a ground potential and configured to output a detected peak value of the input current via the buffer at the secondary winding of the current transformer; ~~[[and]]~~

a zener diode connected between the diode and the buffer, said zener diode comprising a cathode connected to both the cathode of the diode and an input terminal of the buffer, and an anode connected to a ground potential; and

a control apparatus configured to compare a target value with the detected peak value outputted via the buffer and control a current applied to the coil of induction heating device according to a result of the comparing.

2. (Canceled)

3. (Currently Amended) ~~[[A]] An electric current detection circuit [[for]] in an induction heating device detecting an electric current comprising:~~

a current transformer having a primary winding connected to a coil of the induction heating device;

a buffer;

a diode configured to detect a peak value of an input current, the diode comprising an anode connected to a secondary winding of the current transformer at an input side of the circuit and a cathode connected to the buffer at an output side of the circuit;

a capacitor having one end connected to the cathode of the diode and the other end connected to a ground potential and configured to output a detected peak value of the input current via the buffer at the secondary winding of the current transformer;

a zener diode connected between the diode and the buffer, said zener diode comprising a cathode connected to both the cathode of the diode and an input terminal of the buffer and an anode connected to a ground potential; [[and]]

a shunt resistor having one end connected to both the cathode of the diode and the input terminal of the buffer and the other end connected to a ground potential; and

a control apparatus configured to compare a target value with the detected peak value outputted via the buffer and control a current applied to the coil of induction heating device according to a result of the comparing.